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ABSTRACT

This student learning outcomes assessment report from Prince George's Community College (PGCC) in Maryland summarizes findings of several ongoing assessments. Part I provides an executive summary and reviews changes in academic regulations and standards adopted in 1993-94, including: (1) extending minimum standards for academic standing to include developmental courses; (2) adding the category of academic restriction, which limits course registration for students who fail to meet certain standards while on academic probation; (3) setting a 12-credit limit for deferring placement testing or prescribed remediation; (4) tightening the course repeat policy; (5) increasing the severity of academic dismissal by extending the time period when registration is prohibited; and (6) introducing new departmental reading prerequisites, so that over 80% of all introductory courses now require a minimum reading proficiency level. Part II provides data tables and analysis of the following student outcome indicators: achievement of general education objectives; student persistence; graduation rates; transfer to senior institutions; performance of former PGCC students at transfer institutions; licensure and certification examination results; graduate employment; graduate survey findings; student evaluation of teaching; institutional indicators; developmental education; and course pass rates. When appropriate, plans for innovations and changes in these areas are presented. (KP)

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ED 376 897

Student Learning Outcomes Assessment Report

Submitted to the

Maryland Higher Education Commission

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
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PRINCE GEORGE'S
COMMUNITY COLLEGE

December 1994

BT95-3

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PRINCE GEORGE'S COMMUNITY COLLEGE
Office of Institutional Research and Analysis

STUDENT LEARNING OUTCOMES ASSESSMENT REPORT

Board of Trustees Report BT95-3
December 1994

Introduction

Since its founding in 1958, Prince George's Community College has monitored the achievements of its students and it continues to do so today. Faculty evaluate student accomplishments in the classroom, laboratory, clinical site, and athletic field. Instructional divisions and departments monitor their courses and programs for effectiveness. The college's Office of Institutional Research and Analysis completes several studies each year examining student achievement, with the results shared with top administration, faculty, and the college's governing board.

This report summarizes the findings of several ongoing assessment processes. The report format follows guidelines issued by the Maryland Higher Education Commission. It is intended to inform the Board of Trustees, the college community, and the public about the achievements of students enrolled in credit classes at PGCC. The report is testimony to the college's commitment to an assessment program that reflects the campus mission, provides public accountability, leads to institutional improvement, and enhances student learning.

Part I

Executive Summary and Institutional Impact

The college's recent student outcomes assessment efforts have led to significant revisions to policy and several new programs designed to enhance student achievement. Many of these are described in the discussions of outcomes indicators presented in Part II of this report. Major collegewide changes will be highlighted in this executive summary.

During the 1993-94 academic year, the administration proposed and the Board of Trustees adopted several sweeping changes in academic regulations and standards, including (1) extending minimum standards for academic standing to include developmental courses; (2) adding the category of academic restriction, which limits course registration for students who fail to meet certain standards while on academic probation; (3) setting a 12-credit limit for deferring placement testing or prescribed remediation; (4) tightening the course repeat policy; and (5) increasing the severity of academic dismissal by extending the time period where registration is prohibited. In addition, many departments introduced new reading prerequisites for their courses. Over 80 percent of all introductory courses now require a minimum reading proficiency level.

Many of these campus and departmental policy changes were responses to information revealed by analyses undertaken to comply with statewide accountability mandates. New analytical tools, such as detailed longitudinal cohort files for tracking student progress over time, have yielded new insights into student behavior that have informed the recent policy changes. For example, findings that substantial numbers of students identified as needing remediation were in fact avoiding enrollment in appropriate developmental courses led to the new limit on credits attempted prior to completion of remediation.

This past year also saw increased faculty involvement in the collegewide assessment of student outcomes. As part of the college's Self-study for Middle States reaccreditation, a study group on student outcomes and intellectual development--primarily staffed by faculty--examined student outcomes processes and findings and made several recommendations for refinement. These included greater use of outcomes data in establishing departmental goals, creation of a task force to identify departmental information needs to support this planning process, initiation of a periodic survey of students leaving PGCC without a degree, creation of a task force on student intellectual development to reexamine the college's general education requirements, implementation of an exit survey to better assess student intellectual development, and professional development for faculty to increase their student achievement evaluation methods.

In his remarks to the faculty at the beginning of the fall 1994 semester, the vice president for instruction stressed the need for a campus-based evaluation process:

> A mechanism of internal assessment is needed to focus our attention on the efficiency and effectiveness of our courses and curricula, and to guide on-going improvement in our academic program. We continue to provide the state with data and information as part of their program of institutional outcomes assessment. To date, however, we have not used the information at our disposal to plan our academic future. Facing the possibility of declining enrollments and inadequate funding, it is essential that we evaluate our strengths and weaknesses, and develop strategies for maintaining a viable academic program.

To provide a focus for internal academic assessment, the vice president for instruction assigned coordination of this effort to the academic assistant to the vice president for instruction. During the 1994-95 academic year, she will work with the deans, department chairs, and individual faculty to shape college academic planning and assessment efforts into a "guidance system for continuous academic improvement." In the words of the vice president for instruction, "it is only through our academic strength that we can be assured of surmounting the challenges that lie ahead."

Part II

Common Indicators

This section presents student outcome indicators mandated for inclusion in this report by the Maryland Higher Education Commission. Following a tabular presentation of the data, the trend over the past three years is analyzed and the college's response, if any, is described.

General Education

Prince George's Community College believes all degree-seeking students should be able to communicate effectively, think critically, understand and interpret numerical data, understand the scientific method, appreciate cultural diversity, and value the fine and performing arts. The college attempts to ensure that all degree-seeking students meet these general education goals by requiring students to earn a minimum number of credit hours in specified subject areas.

In lieu of expensive evaluation procedures such as standardized testing, portfolio assessment, or personal interviews, the college relies on the individual assessments of its graduates as to the level of achievement of its general education mission. Graduates are asked in the annual follow-up survey to rate the extent to which PGCC attendance helped them achieve ten goals of the general education program.

Analysis. The response pattern has been consistent over the seven years the questions have been asked. Graduates report that their experiences at PGCC increased their enjoyment of learning, clarified their educational and career goals, and enhanced their self confidence. Graduates as a group have indicated that their PGCC attendance helped them more than a fair amount in developing their writing and reading skills. The college has been less successful in imparting knowledge of other cultures and appreciation of the fine arts.

Planning for Innovation and Change. Partly in response to the relatively low ratings of student learning about other cultures, the college revised its graduation requirements for the Associate degree to include a three-credit requirement in cultural diversity. All degree candidates must complete a course from an approved list including courses offered in anthropology, literature, foreign languages, geography, history, philosophy, political science, and speech communication. Although not currently assessed by the survey instrument, the college has also added a computer literacy requirement for all degree candidates. All future degree recipients will have to have completed at least one course in computers or information systems.

Achievement of General Education Objectives Graduate Self-reported Ratings, Five-point Scale			
	FY91 (N=395)	FY92 (N=386)	FY93 (N=344)
Enjoyment of learning	3.93	3.91	3.92
Goal clarification	3.76	3.88	3.87
Self confidence	3.93	3.89	3.85
Writing improvement	3.51	3.47	3.47
Reading comprehension	3.45	3.30	3.37
Science understanding	3.37	3.42	3.28
Mathematics improvement	3.20	3.20	3.17
Attentiveness to news	3.18	3.19	3.05
Knowledge of other cultures	3.07	2.94	2.91
Appreciation of fine arts	2.82	2.73	2.52

Student Persistence

To increase the college's understanding of student attendance patterns, progress toward degree completion, and eventual goal achievement, the Office of Institutional Research and Analysis has instituted a series of longitudinal cohort analyses following the experiences of students entering the college in fall 1990, 1992, and 1994. The status of the fall 1990 entering cohort will be summarized in this section.

A total of 2,643 students entered PGCC as first-time college students in fall 1990. Only 61 percent returned in spring 1991, although an additional 11 percent would enroll at PGCC in a later semester during the four-year period under study. Over time, the proportion of the initial entering cohort still attending PGCC declined steadily. By spring 1994, only 344 or 13 percent of the 2,643 students entering in fall 1990 were still enrolled at PGCC. The table at the top of the next page displays term-by-term attendance of the 1990 cohort for all 16 terms through summer session II of 1994.

Fall 1990 Entrants, Attendance by Term				
	Students Attending Specified Term		Students Attending Specified or Subsequent Term	
	Number	Percent	Number	Percent
Fall 1990	2,643	100%	2,643	100%
Spring 1991	1,614	61%	1,898	72%
Summer I 1991	267	10%	1,516	57%
Summer II 1991	160	6%	1,493	56%
Fall 1991	1,175	44%	1,478	56%
Spring 1992	968	37%	1,275	48%
Summer I 1992	187	7%	1,014	38%
Summer II 1992	115	4%	991	37%
Fall 1992	727	28%	977	37%
Spring 1993	595	23%	816	31%
Summer I 1993	125	5%	615	23%
Summer II 1993	92	3%	595	23%
Fall 1993	462	17%	567	21%
Spring 1994	344	13%	382	14%
Summer I 1994	84	3%	117	4%
Summer II 1994	58	2%	58	2%

As of spring 1994, less than five percent of the fall 1990 entrants had earned an Associate degree from PGCC. How much progress had the other students made during this time? One measure is cumulative credits earned. A fourth of the students had earned at least 30 credits. But 1,001, or 38 percent, had earned fewer than six credits. A fifth of the students entering in fall 1990 had yet to earn a single credit by the end of spring 1994. These students may have passed developmental courses, which do not award credit, but failed or withdrew from any credit classes they may have taken. The table on the next page shows the cumulative credits earned at the end of each major term during the study period.

Cumulative Credits Earned by Fall 1990 Entrants End of Fall and Spring Terms, 1990-1994								
Total Credit Hours Earned	Fall 1990	Sprg 1991	Fall 1991	Sprg 1992	Fall 1992	Sprg 1993	Fall 1993	Sprg 1994
0	846	669	592	572	548	540	524	519
1 - 5	814	613	546	521	502	495	489	482
6 - 11	667	573	514	458	427	405	392	395
12 - 17	315	357	318	298	276	265	265	245
18 - 23	1	242	216	211	208	194	184	194
24 - 29	0	150	170	152	149	154	146	150
30 - 44	0	39	248	264	279	276	277	261
45 - 59	0	0	39	144	172	183	192	199
60 or more	0	0	0	23	82	131	174	198

Patterns of attendance analysis has revealed that the first few terms are a time of high attrition. Getting off to a good start, indicated by enrollment in the first three major terms, greatly enhances a student's chances of success. Returning for class in the spring, and also returning the following fall--"surviving" the summer break to continue studies--are associated with credit accumulation and eventual transfer or graduation. Nearly 57 percent of those attending the first three major terms (fall 1990, spring 1991, and fall 1991) had earned at least 30 credits by the end of spring 1994. Less than five percent of the remaining students had earned 30 credits.

Implementation of the Transfer Student System (TSS) component of the Student Outcome and Achievement Report (SOAR) produced by the Maryland Higher Education Commission permits meaningful analysis of student outcomes for the fall 1990 cohort as of spring 1994. Earlier research office studies have documented the primacy of transfer over graduation as a conventional outcome measure at PGCC. Indeed, the incidence of transfer is twice that of graduation. Thus, attempting to assess student outcomes without adequate information concerning transfer is unwise. While the Commission's TSS data is restricted to public colleges and universities in Maryland, and thus misses transfers out of state or to independent institutions, prior survey research suggests that typically 90 percent of PGCC transfers continue at in-state public colleges. Thus, acknowledging that transfer will be somewhat underestimated (and the "drop out" rate thus overstated), the college can make a preliminary assessment of the outcomes of the entering class of 1990.

Cumulative Credits Earned as of the End of Spring 1994 Fall 1990 Entrants Attending First Three Major Terms				
Total Credit Hours Earned	Students Attending First Three Major Terms (Fall 90-Spring 91-Fall 91)		All Other Students	
	Number	Percent	Number	Percent
0	25	2%	494	31%
1 - 5	50	5%	432	27%
6 - 11	76	7%	319	20%
12 - 17	101	10%	144	9%
18 - 23	106	10%	88	5%
24 - 29	90	9%	60	4%
30 - 44	212	21%	49	3%
45 - 59	182	18%	17	1%
60 or more	188	18%	10	1%
Total	1,030	100%	1,613	100%

As of spring 1994, a total of 293 (or 11 percent) of the fall 1990 entrants had either earned an award at PGCC or transferred to a senior college or university in Maryland. Six percent, or 166 students, had transferred without earning a PGCC degree or certificate. Twenty-seven students had earned a PGCC award and transferred. Three percent (89 students) had graduated with an Associate degree but not transferred as of spring 1994. Eleven other students had earned certificates and not transferred. An additional 224 students had earned 30 or more credits at PGCC with cumulative grade point averages of 2.0 and above. While not enrolled in spring 1994, and not yet graduated or transferred, these students had achieved sophomore status in good academic standing. Another 344 students who started in fall 1990 were enrolled at PGCC in spring 1994. Adding up these achievers and persisters yields a total of 861 students who had either transferred, graduated, achieved sophomore status, or were still enrolled. Thus one in three fall 1990 entrants had achieved some measure of success, as traditionally measured, four years after starting their college careers at PGCC.

Outcomes as of the End of Spring 1994 of Students Entering in Fall 1990		
Outcome	Number	Percent
Transferred to a Maryland senior college or university; did not receive PGCC award	166	6%
Transferred and received an award from Prince George's Community College	27	1%
Earned an Associate's degree from PGCC; did not transfer within study period	89	3%
Earned a certificate from PGCC; did not transfer within study period	11	<1%
Left PGCC after earning 30 or more credits with a grade point average of 2.0 or above	224	9%
Enrolled at PGCC in Spring 1994	344	13%
Achievers/Persisters (subtotal of above)	861	33%
Special Motive--Attended one year or less and had enrichment or other short-term goals	256	10%
Left PGCC without transferring, graduating, or attaining sophomore status with a 2.0 GPA	1,526	58%
Total students	2,643	100%

How did getting off to a "good start" affect these outcomes patterns? The "achiever-persister" rate nearly doubled to 64 percent for those fall 1990 entrants enrolled in both spring 1991 and fall 1991. In contrast, the "achiever-persister" rate for students not attending all three first major terms (fall 1990-spring 1991-fall 1991) was 12 percent. "Good starters" were over four times as likely to have transferred and over 16 times as likely to have graduated. Only nine of the 1,613 students not enrolled in both spring 1991 and fall 1991 had earned the Associate degree within four years of entry to PGCC. A total of 107 of the 1,030 "good starters" had earned a degree. To put it another way, 92 percent of the degree earners attended the first three major terms.

Analysis. Longitudinal cohort analysis, or following a group of entering students over time, provides a clearer understanding of student enrollment and progress than cross-sectional studies. Research office tracking of the 2,643 students starting college at PGCC in fall 1990 has revealed that one-third had achieved some measure of success

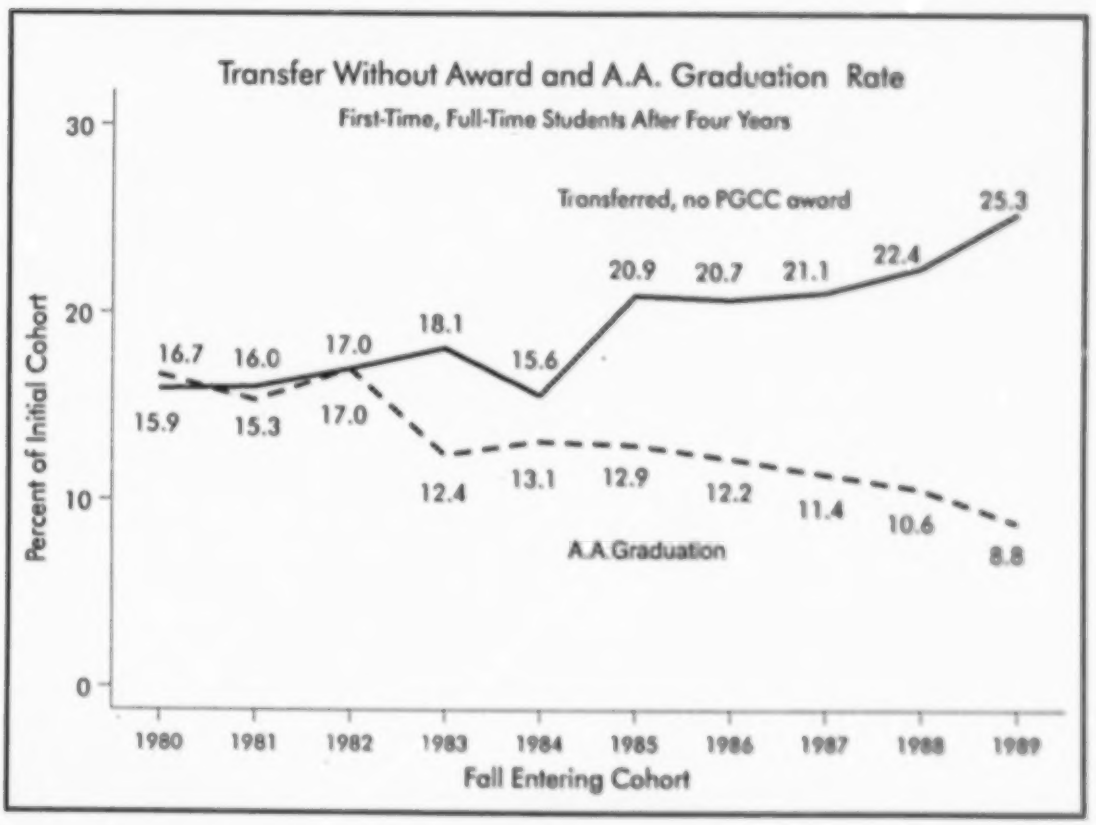
within four years, as traditionally assessed in terms of transfer, graduation, attainment of sophomore status in good standing, or continued enrollment. Another ten percent had declared short-term enrichment or job skill goals. Nearly three in five, however, had degree or transfer goals and had discontinued their studies at PGCC without transferring, graduating, or earning 30 credits in good standing within four years of entry. Persisting through the second and third major term after entry substantially improved the chances of success. These initial findings from the study of the fall 1990 entering cohort will be supplemented by more in-depth analysis currently underway.

Outcomes as of the End of Spring 1994 of Students Entering in Fall 1990 Students Attending First Three Major Terms and All Others				
	Students Attending First Three Major Terms (Fall 90-Spring 91-Fall 91)		All Other Students	
Outcome	Number	Percent	Number	Percent
Transfer only	119	12%	47	3%
Degree and Transfer	26	3%	1	<1%
Degree/no transfer	81	8%	8	<1%
Certificate	9	1%	2	<1%
Sophomore w/2.0+ GPA	205	20%	19	1%
Enrolled Spring 94	223	22%	121	8%
Achievers/ Persisters	663	64%	198	12%
Special Motive	0	0%	256	16%
Dropouts	367	36%	1,159	72%
Total	1,030	100%	1,613	100%

Planning for Innovation and Change. Early findings from the longitudinal tracking of the fall 1990 entering cohort have prompted additional research, particularly into the role that remediation plays in student progress. Studies of developmental needs and coursetaking have had major policy ramifications, as discussed in a later section. In addition, the college is preparing a Title III proposal to address the needs of "at-risk" students. Findings from the fall 1990 cohort analysis will be an integral part of the development of this proposal. For example, the proposal will include creation of a "Freshman Academy" that will emphasize strategies to assist students through the first three semesters of attendance, in keeping with the "good start" findings above.

Graduation Rates

What percentage of PGCC students graduate, and how does this compare with peer colleges? Analyses of enrollment and degree files by staff at the Maryland Higher Education Commission provide one answer. These analyses report the number and percentage of first-time, full-time students graduating or transferring to a Maryland senior institution four years after entering state community colleges.



The graduation rate of students entering PGCC as full-time students in fall 1989 was 8.8 percent, the lowest four-year graduation rate on record. The graduation rate of fall full-time entrants has declined steadily since the 1984 cohort's rate of 13.1. PGCC's graduation rate for full-timers in the 1989 cohort was higher than the comparable rate for Montgomery College (7.1), but was notably lower than the rates for Essex (22.9), Catonsville (21.3), and Anne Arundel (21.0) community colleges.

Analysis. As shown in the accompanying graph, concurrent with the decline in graduation rates PGCC has experienced strong growth in the transfer rate to senior colleges and universities in Maryland. Indeed, the *combined* transfer and graduation rate for the 1989 cohort was the highest on record at PGCC. Reasons for the increasing percentage of students transferring within four years of entry to PGCC are unknown.

Planning for Innovation and Change. Concerns about low graduation rates prompted creation of the longitudinal cohort files now being used to track fall entering classes. These files permit detailed analyses of the term-by-term performance of each cohort, and of subgroups of students within each cohort. More advanced, multivariate analysis will also be possible to further explore the correlates of student success. Such studies may suggest policy revisions and new programs to better assist students in meeting their degree goals. The college already has in place an array of student support services, including mentoring and tutoring programs, to promote student persistence. PGCC currently expends $500,000 a year on such services for underprepared students, not counting the costs of placement testing or remedial instruction.

Transfer to Senior Institutions

As noted above, the rate of transfer to senior institutions seems to be increasing among PGCC students. Where do PGCC transfer students go to continue their education? Using statewide fall enrollment reporting systems, staff at the Maryland Higher Education Commission generate a report each year showing the fall-to-fall enrollment migration of students among Maryland public colleges and universities. The resulting "transfer matrix" provides one indicator of transfer volume and destinations, by showing where students enrolled at a particular campus one fall are enrolled the following fall. Students who transfer during a spring or summer session and do not continue in the fall are missed by this method, as are students who transfer out-of-state or to independent institutions.

The transfer matrix identified 906 students enrolled at PGCC in fall 1992 who were enrolled in fall 1993 at a Maryland public four-year college or university. The most popular transfer destination was the University of Maryland at College Park, though the number of PGCC transfers to UMCP was the lowest in years. The second

most popular transfer destination was the University of Maryland University College. A total of 242 students enrolled at PGCC in fall 1992 were enrolled at UMUC in fall 1993. Third most popular for PGCC transfers was Bowie State University, with 146 students identified as migrating to Bowie over the fall 1992-fall 1993 period.

PGCC Transfers to Maryland Senior Colleges and Universities
Fall-to-fall Enrollment Migration

	1990-91	1991-92	1992-93
Univ. of Maryland College Park	400	345	293
Univ. of Maryland University College	235	225	242
Bowie State University	129	147	146
Univ. of Maryland Baltimore County	54	67	61
Towson State University	65	50	54
Salisbury State University	37	25	26
Frostburg State University	23	12	20
Univ. of Maryland Eastern Shore	13	20	19
Morgan State University	4	18	17
Univ. of Maryland at Baltimore	16	9	16
Saint Mary's College of Maryland	6	10	5
University of Baltimore	5	5	4
Coppin State College	2	2	3
Totals	989	935	906

Examining transfer from PGCC to four-year institutions is an appropriate measure for evaluating a key community college mission. But this exclusive one-way look misses much student movement, including substantial "reverse transfer" from senior institutions to the community college. In recent years, the number of students transferring from senior institutions to PGCC has equalled nearly two-fifths of the total transferring from PGCC to senior institutions. The traffic flow varied by institution. The University of Maryland at College Park, the leading destination of transfers from PGCC, was also the leading source of "reverse transfers" to PGCC in fall 1993. Over the fall 1992-fall 1993 period, 293 students transferred from PGCC to UMCP while 144 transferred from UMCP to PGCC. An extreme case of the "reverse transfer"

phenomenon was Morgan State University. More students transferred from Morgan to PGCC (18) than from PGCC to Morgan (17).

Net Transfers, PGCC-Maryland Public Senior Institutions Fall 1992-1993			
	From PGCC to Four-Year	From Four-Year to PGCC	Net Transfers
Univ. of MD-University College	242	62	180
Univ. of MD-College Park	293	144	149
Bowie State University	146	71	75
Univ. of MD-Baltimore County	61	15	46
Towson State University	54	11	43
Salisbury State University	26	8	18
Univ. of MD at Baltimore	16	0	16
Frostburg State University	20	11	9
University of Baltimore	4	0	4
Coppin State College	3	0	3
St. Mary's College	5	3	2
Univ. of MD-Eastern Shore	19	18	1
Morgan State University	17	18	(1)
Totals	906	361	545

Analysis. With three campuses of the University of Maryland located in Prince George's County (Bowie State, College Park, and University College), PGCC students have several transfer options close to home. Indeed, three-fourths of PGCC students who transfer to a public university in Maryland attend one of these three. Promoting successful transfer is a major mission of Prince George's Community College. A high rate of transfer success represents a positive outcome for the college and its students.

Planning for Innovation and Change. To promote transfer to three local historically black universities, PGCC has signed agreements with Bowie State University, Howard University, and Morgan State University. The agreements, known as the Connect

Program, are intended to improve the transfer rate to these schools and to make the transition for students as smooth as possible. Under the program, students who are ineligible to enroll at the four-year schools due to deficiencies in their high school record or SAT scores are referred to PGCC with the understanding that upon completion of prescribed courses with an appropriate grade point average they are guaranteed admission to the senior institutions. In fall 1994, a total of 82 students referred to PGCC enrolled at PGCC as part of the Connect Program.

Performance of Former PGCC Students at Transfer Institutions

How well do PGCC transfers do at senior institutions? Information from the Commission's Transfer Student System (TSS) provides some answers. Four-year, public colleges and universities in Maryland are required to provide the Commission with information concerning transfer student enrollment and performance, such as term of entry, program, cumulative grade point average and credits earned, and bachelor's degree attainment. Transfer students are identified by the receiving institution, and are defined as having transferred in at least 12 credit hours and as having a Maryland community college identified as their last college attended prior to transferring in. The most recent TSS included information about the spring 1993 status of students transferring during the 1988-89 academic year.

Cumulative Grade Point Averages at Maryland Senior Institutions as of the End of Spring 1993
Community College Students Transferring During 1988-89
(Percentage Distribution)

Grade Point Average	Transfers from Prince George's Community College	All Other Maryland Community College Transfers
0 - .99	5%	6%
1.00 - 1.99	12%	10%
2.00 - 2.99	43%	42%
3.00 - 3.99	35%	39%
4.00	4%	3%
Total students (100%)	798	4,652

A total of 832 former PGCC students were identified as transfers to Maryland public institutions during 1988-89. Grade point averages were available for 798; the remainder withdrew from all courses, took only remedial courses, received all incompletes, took only pass/fail courses, or had some combination of these resulting in a lack of GPA. Eighty-two percent of PGCC's total transfers that year had cumulative GPAs of 2.0 or above, compared to 84 percent of all Maryland community college transfers.

The Transfer Student System also reported bachelor's degree attainment rates for community college transfers. Degree attainment at senior institutions with at least 20 PGCC transfers during 1988-89 ranged from 21 percent at University College to 81 percent at Salisbury State University. PGCC students had higher graduation rates than other Maryland community college transfers at Salisbury and Towson, but lower rates at Bowie State University and the Baltimore County, College Park, and University College campuses of the University of Maryland.

Bachelor's Degree Attainment Rates as of Spring 1993 of Community College Transfers during 1988-89

	Transfers from Prince George's Community College	All Other Maryland Community College Transfers
Bowie State University	46% (N=68)	55% (N=49)
Salisbury State University	81% (N=31)	68% (N=198)
Towson State University	74% (N=49)	68% (N=733)
UM-Baltimore County	35% (N=37)	50% (N=787)
UM-College Park	57% (N=334)	64% (N=1,038)
UM-University College	21% (N=237)	27% (N=468)

Analysis. Students transferring from PGCC to public four-year colleges and universities in Maryland on the whole seem to perform satisfactorily, although marginally less well than transfers from other Maryland community colleges. This conclusion based on the recently available Transfer Student System data is consistent

with similar summaries of transfer performance information provided in prior years to the PGCC research office by individual four-year campuses.

Planning for Innovation and Change. The college's mentoring and Connect programs are examples of how PGCC strives to enhance the preparation of students for successful transfer to four-year institutions. Strengthening of the college's developmental education program, described below, may also result in better performance of PGCC students at their transfer destinations as well as in coursework at the community college.

Licensure and Certification Examination Results

Graduates of PGCC's health technology programs usually take licensure or certification examinations shortly after graduation. The conventional measure for program evaluation is the pass rate (number passing divided by number tested) of first-time examinees on the entry level exam. Graduates of PGCC's programs in radiography and respiratory therapy generally have done very well; in some years, every candidate has passed. The college's nuclear medicine graduates achieved a 100 percent pass rate in 1994, after two years of sub-par performance. Graduates of the college's medical records program, now known as health information technology, have had greater difficulty with their exam than graduates of other health technology programs.

Pass Rates of PGCC Graduates on Certification Exams
First-time Candidates

	1992	1993	1994
Medical Records	67% (N=6)	57% (N=7)	N.A.
Nuclear Medicine	78% (N=9)	80% (N=10)	100% (N=13)
Nursing	90% (N=77)	80% (N=109)	85% (N=149)
Radiography	81% (N=21)	100% (N=15)	97% (N=29)
Respiratory Therapy	93% (N=15)	93% (N=14)	100% (N=14)

The college's nursing program has had pass rates on the NCLEX-RN exam below national and state averages. After achieving a high point of 90 percent passing in 1992, the pass rate dropped to 80 percent in 1993. It rebounded to 85 percent in 1994.

Analysis. The Maryland Board of Nursing expects programs to achieve a minimum pass rate of 85 percent on the licensure examination. PGCC's nursing department has 90 percent as its minimum target.

Planning for Innovation and Change. The nursing department has implemented several changes to promote student learning and improve graduate performance on the NCLEX-RN examination. Examples include new admission and progression policies, introduction of interactive software in the new computerized health technology learning center, and revised classroom teaching practices focusing on problem solving and case studies. In addition, students are now required to spend time on drill and practice in the learning laboratory. Examinations in the final course in the nursing sequence are now given on computers, since the NCLEX-RN is now administered exclusively on computer.

Graduate Employment

A quarter of the college's students attend PGCC to prepare for entry into a new career or update job skills. Students with job-related goals are more likely than other students to complete their PGCC programs. A year after their PGCC graduation, how many of these students are working in jobs related to their community college curriculum?

Eighty-seven percent of the graduates of 1993 were employed when surveyed a year after commencement. Nine of ten were in full-time positions. Fifty-nine percent of the employed graduates were working in jobs related to their community college curriculum. The related-employment rate varied by program. As has consistently been the case, graduates of PGCC's programs in nursing and allied health have had the greatest success finding related employment. In recent years, over 90 percent of the college's graduates of health technology curricula have found program-related employment within a year of graduation. Other curricular areas have had relatively consistent placement rates as well, though at lower levels. Three-fifths of the college's graduates in computer technology and information systems have found related employment. Fifty to sixty percent of the business management graduates have secured management positions. Half the early childhood education graduates have found related jobs.

Graduates of several career programs in the class of 1993 had lower than usual related-employment placement rates. The rate for criminal justice graduates fell for

the second consecutive year, with only 44 percent finding related jobs. Only a third of the college's graduates in electronics engineering and computer service technology found related jobs, whereas in past years two-thirds to three-fourths had. Only 29 percent of the paralegal graduates were working in paralegal jobs, down from 63 percent for the class of 1992. And none of the five respondents who graduated in marketing management in 1993 were employed in related positions.

Related Employment Rates of Career Program Graduates
Selected Program Areas, FY91-93

	FY91	FY92	FY93
Allied Health	100% (N=21)	91% (N=33)	96% (N=27)
Nursing	98% (N=47)	95% (N=42)	91% (N=43)
Computer/Information Systems	61% (N=28)	58% (N=31)	61% (N=23)
Accounting	56% (N=18)	86% (N=21)	56% (N=16)
Business Management	55% (N=67)	59% (N=70)	50% (N=56)
Early Childhood Education	50% (N=10)	50% (N=8)	50% (N=8)
Criminal Justice	55% (N=11)	50% (N=18)	44% (N=16)
Electronics/Computer Service	73% (N=11)	73% (N=11)	33% (N=9)
Paralegal	46% (N=35)	63% (N=19)	29% (N=17)
Marketing Management	40% (N=5)	40% (N=5)	0% (N=5)

Graduates of the class of 1993 were also asked the extent to which completion of their PGCC program helped them get their current job, qualify for a promotion, improve job skills, and prepare for a future career. A third of the respondents reported that program completion had substantially helped them get their current job or qualify for a promotion. Majorities indicated that their PGCC program had improved their job skills and prepared them for a new career.

PGCC Program Completion Impact on Employment Outcomes Employed Graduates, Class of 1993				
	Extent to which Completing Program Helped Graduate			
	Get Current Job	Qualify for Promotion	Improve Job Skills	Prepare for New Career
5-A great deal	30%	21%	30%	40%
4	5%	13%	24%	21%
3-A fair amount	14%	16%	21%	20%
2	5%	11%	10%	9%
1-Not at all	46%	39%	15%	10%
Substantial help (4,5)	35%	34%	55%	61%
Some help (3,4,5)	49%	51%	75%	81%
Scale mean	2.69	2.67	3.45	3.72
Total respondents (100%)	280	269	275	278

Analysis. Within a year of graduation, most graduates are employed full-time and those working are in jobs related to their PGCC curriculum. Nine in ten nursing and allied health program graduates typically are in program-related jobs. Some programs had unusually low related-employment rates among 1993 graduates. The number of survey respondents at the level of individual programs is often low, however, so it is unclear if these findings are indicative of a poor job market in certain occupations. Most graduates gave credit to their PGCC program for helping them improve job skills and prepare for new careers.

Planning for Innovation and Change. The college will continue to monitor the job attainment of its career program graduates. The college has advisory councils for its programs in accounting, computer information systems, construction management, criminal justice technology, drafting technology, early childhood education, electronics engineering/computer service technology, health information technology, hospitality services management, management, nuclear medicine, nursing, office administration, paralegal, radiography, real estate, and respiratory therapy. These advisory councils, composed of practicing professionals in the corporate and public sector, keep program faculty apprised of the latest developments in the job market and in the skills employers expect of college graduates. The college has also embraced use of the

formal DACUM (Developing A CUrriculuM) process as a means of responding efficiently and effectively to the need for curriculum development. In addition to traditional DACUM panels to establish new curricula, PGCC has used the process to assess and enhance existing academic programs.

Graduate Survey Findings

Ninety percent of the respondents to the follow-up survey of 1993 graduates indicated that they would recommend PGCC to a person seeking a degree in their program of study. Only three percent said they would not; the remaining respondents weren't sure. Respondents who had continued their studies at a four-year college or university rated their PGCC preparation for transfer highly. Over four-fifths said their preparation had been good or very good. Only two percent gave negative ratings to the community college for its job in helping them get ready for advanced study.

Graduate Ratings of PGCC Preparation for Transfer to Senior College or University
(Percent of Survey Respondents)

	1991	1992	1993
Very Good	35%	36%	35%
Good	44	49	48
Fair	17	13	15
Poor	2	2	1
Very Poor	2	1	1
Total Respondents (100%)	176	201	151

Analysis. When asked to rate their satisfaction with PGCC and its various programs, survey respondents overwhelmingly give positive ratings. When the graduates of the class of 1992 were asked, "if you had to do it over again, would you attend this community college?", nine of ten said yes. Graduates have consistently rated the preparation they have received from PGCC for immediate employment or further study in very positive terms. Even surveys of "dropouts," students discontinuing their studies short of achieving their stated goals, have generally found satisfaction with the college.

Planning for Innovation and Change. Although "customer satisfaction" surveys have consistently found most students very pleased with PGCC and its programs and services, the college is considering initiation of a new survey to monitor student opinion on a regular basis. Graduates have been overrepresented in past assessment efforts. The new survey would target current students, and be an integral part of recently implemented campuswide quality customer service efforts.

Student Evaluation of Teaching

Student evaluation of teaching is a key component of the college's Faculty Professional Growth and Development Plan. Full-time faculty are evaluated by a full-scale evaluation procedure every year for the first five years. Tenured faculty and faculty on annual contracts who have served five years are evaluated every three years of service unless a special evaluation is requested. Full-time faculty who exceed established threshold scores on their previous evaluation may opt for a shorter, more focused package for their periodic evaluation. Evaluation by students is part of the smaller package.

In 1993-94, student evaluations were conducted for 408 teaching faculty. The mean response across all items was 4.3 on a five-point scale. Eighty-four teachers, or 21 percent of those evaluated, received average student evaluation scores below 4.0. Full-time faculty scoring in this group must, because of their student evaluations, undergo the full-scale evaluation process the next time. Specific student complaints or below-par ratings on certain evaluation items may trigger a conference with instructional administrators which may lead to various faculty remediation activities.

Analysis. Findings from student evaluations of teachers have been remarkably consistent over time. Scale means and the proportion of faculty falling below the threshold for the shorter evaluation process have been essentially unchanged in recent years.

Planning for Innovation and Change. The college is committed to supporting its faculty in their teaching mission. An example is the Faculty Mentor Program, providing teachers with confidential counseling and assistance from designated master teachers to improve their classroom techniques. While student evaluations are an important component of the college's personnel performance assessment program, inclusion of this indicator in a student outcomes assessment is worth reconsideration.

Institutional Indicators

In addition to the mandated common indicators, PGCC has been monitoring basic skills proficiency as measured by placement tests, student enrollment in

developmental education, and course pass rates. The first two indicators are especially appropriate for community colleges, since their open admissions policies permit enrollment of students who may be poorly prepared for college work. In addition, many community college students do not have degree or transfer goals. Thus a measure of student achievement at the course level is a useful complement to the traditional graduation and transfer rate measures.

Developmental Education

All of the above measures of student experience and achievement at Prince George's Community College must be interpreted within the context of the college's open admissions policy. The college accepts all applicants who are high school graduates, holders of high school equivalency diplomas, and anyone 16 years of age or older who has left elementary or secondary school. There are no admissions tests or high school rank or grade point average requirements. If you are 16 and want to attend, you can enroll.

To ensure a foundation for college-level instruction, all students seeking enrollment in credit courses are required to demonstrate, either through placement testing or through completion of developmental coursework, basic academic skills proficiency in reading, written expression, and mathematics.

Percent of Prince George's County Public High School Graduates Entering PGCC Each Fall Needing at Least One Developmental Course

	Total Tested in All Three Areas	Needed Remediation	
		Number	Percent
1994	886	629	71%
1993	945	646	68%
1992	926	630	68%
1991	908	602	66%
1990	1,037	590	57%
1989	1,033	607	59%
1988	1,116	624	56%

Seven in ten students entering the college in fall 1994 needed remediation in at least one basic skill. The percentage of entering students needing remediation has increased steadily in recent years. A fourth of the 1994 graduates of Prince George's County high schools entering PGCC in fall 1994 needed remediation in all three areas of reading, English, and mathematics. Two-fifths of the students needed remedial courses in reading; a similar proportion needed English composition. Mathematics was the area of greatest need. Sixty-one percent of the high school graduates needed remediation in mathematics. Many students need to complete two or more developmental mathematics courses--often starting with beginning arithmetic-- to be ready for, and eligible for, the introductory credit class.

What percentage of students identified as needing remediation enroll in the appropriate developmental courses? What percentage complete remediation? The longitudinal analysis of the fall 1990 entering cohort is illustrative. Four years after entry, approximately two-thirds of the students identified as needing remediation in each basic skill area had taken developmental courses. The percentage completing remediation in each area, however, was considerably lower. Only thirty-five percent of the students needing developmental reading had completed it by the end of spring 1994. The comparable figure for English was 30 percent. Mathematics had the lowest completion rate, partly because as many as a fourth of the students identified as needing remediation are initially placed in a basic arithmetic course. (Students may successfully complete a lower-level developmental class that prepares them for the next developmental class in the sequence. "Developmental completed" as used here means earning a developmental course grade satisfying the prerequisite for introductory credit courses in each area. A student may need to pass two or more developmental classes in a sequence to "complete developmental" in an area.) Only 120 or 13 percent of the 933 students identified as needing developmental mathematics in fall 1990 had completed remediation in math by spring 1994.

Developmental Needs, Coursetaking, and Completion
Fall 1990 Entrants as of the End of Spring 1994

	Reading		English		Mathematics	
	Number	Percent	Number	Percent	Number	Percent
Developmental needed	872	100%	832	100%	933	100%
Developmental course(s) taken	541	62%	587	71%	629	67%
Developmental completed	306	35%	250	30%	120	13%

Analysis. Over two-thirds of the students coming to PGCC are deficient in at least one basic skill area. If the fall 1990 entering cohort is representative, substantial numbers of students identified as needing remediation have not taken appropriate developmental classes. A third or less of the students needing remediation complete it within four years of entry to PGCC.

Planning for Innovation and Change. The college has implemented several changes to address the issues revealed by the analysis of developmental studies. Students must now complete all required developmental coursework prior to attempting more than 12 credit hours. Each developmental course now requires students to spend at least 30 hours in the computerized learning laboratory. Despite fiscal constraints, the college has added two full-time faculty and six laboratory assistants in educational development.

Course Pass Rates

Student performance in individual courses constitutes a fundamental learning outcome. Assessment, reflected in the final course grade, is the responsibility of the faculty member teaching the course. Successful course completion is a prerequisite for progress in a curriculum, and a useful indicator in itself. Examination of student outcomes at the course level is especially appropriate at community colleges, where as many as half the students enrolled in credit courses may have no intention of earning an Associate degree. Course pass rates, the percentage of initial enrollees receiving passing grades, provide a ready means of assessing student course success.

Fall Course Pass Rates by Division			
	1991	1992	1993
Health Technology	91%	92%	95%
Physical and Health Education	90	86	85
Humanities	83	83	82
Business and Management	82	83	82
Computer/Engineering Technology	80	80	80
English Studies	71	75	78
Social Sciences	76	78	75
Science and Mathematics	65	69	67

Analysis. Students passed 76 percent of their classes in fall 1993, a rate consistent with the fall pass rates achieved since 1990. Collegewide pass rates over the 1977-86 period had been stable, at 71-72 percent each fall. Course pass rates gradually increased over the 1987-1990 period, and have now plateaued at 76 percent. Pass rates have varied by discipline, with courses in science and mathematics most difficult.

Planning for Innovation and Change. The college's Tutoring Center now offers assistance for students in accounting, biology, chemistry, computer information systems, mathematics, and other courses. Services include individual tutoring by appointment, walk-in assistance, and guided small-group study sessions.

Conclusion

This report has presented highlights of numerous student outcomes studies conducted by the college's research office, and summaries of the college's responses to the issues raised by the research findings. The college welcomes reactions to the information presented, and suggestions for improving the assessment and reporting process.